

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended): A file processing apparatus comprising a computer processor, said file processing apparatus including:

an attribute input unit which acquires a value of an attribute for at least one file from the computer processor in order to represent a value of a predetermined attribute for an intended file as a weight, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

a comparison processing unit which compares the value of the attribute with a reference value;

a position determining unit which sets a relative display position of a predetermined object that represents the weight of the attribute, wherein the relative display position is set based on a result obtained from said comparison processing unit; and

a display processing unit which represents the value of the attribute for visual display in terms of whether the weight of the predetermined object is heavy or light, wherein the display position of the predetermined object is set by said position determining unit, and wherein the relative display position indicates that a virtual force is exerted on the object at least in one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 2. (previously presented): The file processing apparatus according to Claim 1, further including an inclination detector which detects inclination of a predetermined region in the file processing apparatus operated by a user, wherein according to the inclination detected by

said inclination detector said position determining unit varies the relative display position and the direction in which the force is exerted.

Claim 3. (previously presented): The file processing apparatus according to Claim 1, wherein said attribute input unit acquires values of the attribute for a plurality of files, said comparison processing unit sets a value of an attribute for at least one of the plurality of files to the reference value, said position determining unit sets relative display positions of a plurality of objects corresponding to the plurality of files, respectively, and wherein said display processing unit displays the plurality of files at the respective display positions and visually represents the comparison of weights of the files via another object representative of the measurement of the weights.

Claim 4. (previously presented): The file processing apparatus according to Claim 3, wherein said comparison processing unit sets, as the reference value, a size of a storage area that stores at least one file, said position determining unit sets a relative display position of an object indicative of the storage area according to the size of the storage area, and wherein said display processing unit visually expresses the comparison of data size between the at least one file and the storage area via the another object.

Claim 5. (previously presented): The file processing apparatus according to Claim 1, wherein said attribute input unit acquires values of an attribute for a plurality of files and said comparison processing unit classifies the plurality of files into a plurality of groups according to the respective values of the attribute, and wherein said display processing unit displays the object in an appearance corresponding to the respective groups.

Claim 6. (previously presented): The file processing apparatus according to Claim 1, wherein said attribute input unit acquires values of an attribute for a plurality of files, said comparison processing unit classifies the plurality of files into a plurality of classes and sequentially compares the values of an attribute for each class, wherein, after relative display positions are temporarily determined respectively as positions that initially display objects for the

plurality of files, said position determining unit sequentially updates the relative display positions in a manner such that comparison results for each class are reflected for each class, and wherein said display processing unit varies the display of the objects according to said updating after the plurality of files are displayed at the temporally determined relative display positions.

Claim 7. (previously presented): The file processing apparatus according to Claim 5, further including a vibration detector which detects a swaying motion at a predetermined region of the file processing apparatus operated by a user, wherein said comparison processing unit performs a comparison processing when the motion is detected, and said position determining unit updates the relative display position according to the result obtained from said comparison processing unit.

Claim 8. (previously presented): The file processing apparatus according to Claim 6, further including a vibration detector which detects a swaying motion at a predetermined region of the file processing apparatus operated by a user, wherein said comparison processing unit performs a comparison processing when the motion is detected, and said position determining unit updates the relative display position according to the result obtained from said comparison processing unit.

Claim 9. (previously presented): The file processing apparatus according to Claim 1, further including:

an instruction receiving unit which receives an instruction from a user intending to change the display position of the object; and

an effect generator which causes, based on the instruction, said position determining unit and said display processing unit to process a change in any of position, shape and appearance of the object.

Claim 10. (currently amended): A method of processing files, including:

setting a relative display position of a predetermined object that symbolically represents the files in terms of whether the weight thereof is heavy or light, based on a value of a predetermined attribute for an intended file, in order to represent the value of a predetermined attribute therefor by using a concept of weight, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating; and

representing visually the weight by displaying the object at the relative display position on a screen, wherein

the relative display position indicates that a virtual force is exerted on the predetermined object displayed on the screen at least in one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 11. (previously presented): The method of processing files according to Claim 10, further including:

detecting inclination of a predetermined apparatus operated by a user; and

varying the relative display positions and the direction in which the force is exerted according to the inclination.

Claim 12. (currently amended): A method of processing files, including:

acquiring values of a predetermined attribute for a plurality of intended files in order to represent the values of a predetermined attribute therefor by using a concept of weight, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

setting, for each of the plurality of files, a relative display position of a predetermined object that represents symbolically the files in terms of whether the weight thereof is heavy or light, based on the values of a predetermined attribute; and

displaying the objects of the plurality of files at the respective display positions on a screen, and expressing visually comparison of the weights of the objects via another object that symbolizes weight measurement, wherein

the relative display positions indicate that a virtual force is exerted on the predetermined objects displayed on the screen at least in one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 13. (previously presented): The method of processing files according to Claim 12, wherein said acquiring further acquires a size of a storage area that stores at least one file, and said setting sets the relative display position of at least one object corresponding to the at least one file, based on a comparison result obtained by comparing a data size between the at least one object and the storage area, and wherein said displaying and expressing represents visually the comparison result via the another object.

Claim 14. (currently amended): A method of processing files, including:
acquiring values of a predetermined attribute for a plurality of files, in order to represent the values of a predetermined attribute for intended files by using a concept of weight, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

setting a temporary sequence for the plurality of files;

determining, based on the temporary sequence, a temporary display position of a predetermined object that symbolically represents one of the files in terms of whether the weight thereof is heavy or light;

displaying the predetermined object that represents the one of the files, at the temporary display position on a screen;

comparing the values of a predetermined attribute between adjacent files in the temporary sequence;

updating the display position based on a comparison result obtained from said comparing;
and

representing visually the weight thereof by varying display contents according to said updating, wherein the temporary display position indicates that a virtual force is exerted on the predetermined object displayed on the screen at least in one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 15. (previously presented): The method of processing files according to Claim 14, further including:

detecting a swaying motion of a predetermined apparatus operated by a user;
performing said comparing when the swaying motion is detected in said detecting;
updating a relative display position of the object according to the comparison result.

Claim 16. (previously presented): The method of processing files according to Claim 10, further including:

acquiring an instruction from a user who intends to cause a display position of the object to be changed; and

changing at least one of position, shape and appearance of the object, based on the instruction.

Claims 17-19. (canceled).

Claim 20. (currently amended): A computer-readable recording medium which stores a program executable by a computer, the program including the functions of:

setting a relative display position of a predetermined object that symbolically represents the files in terms of whether the weight thereof is heavy or light, based on a value of a predetermined attribute for an intended file, in order to represent the value of a predetermined attribute therefor by using a concept of weight, said predetermined attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating; and

representing visually the weight by displaying the object at the relative display position on a screen, wherein the relative display position indicates that a virtual force is exerted on the predetermined object displayed on the screen at least in one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 21. (currently amended): A computer-readable recording medium which stores a program executable by a computer, the program including the functions of:

acquiring values of a predetermined attribute for a plurality of intended files in order to represent the values of a predetermined attribute therefor by using a concept of weight, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

setting, for each of the plurality of files, a relative display position of a predetermined object representing symbolically the files in terms of whether the weight thereof is heavy or light, based on the values of a predetermined attribute; and

displaying on a screen the objects of the plurality of files at the respective display positions, and expressing visually comparison of the weights of the objects via another object that symbolizes weight measurement, wherein the relative display positions indicate that a virtual force is exerted on the predetermined objects displayed on the screen at least in one direction and

indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 22. (currently amended): A computer-readable recording medium which stores a program executable by a computer, the program including the functions of:

acquiring values of a predetermined attribute for a plurality of files, in order to represent the values of a predetermined attribute for intended files by using a concept of weight, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

setting a temporary sequence for the plurality of files;

determining, based on the temporary sequence, a temporary display position of a predetermined object that symbolically represents the files in terms of whether the weight thereof is heavy or light;

displaying an object that corresponds to the plurality of files, at the temporary display position on a screen;

comparing the values of a predetermined attribute between adjacent files in the temporary sequence;

updating the display position based on a comparison result obtained from said comparing;
and

representing visually the weight thereof by varying display contents according to said updating, wherein the temporary display positions indicate that a virtual force is exerted on the predetermined objects displayed on the screen at least in one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 23. (currently amended): A file processing apparatus comprising a computer processor, said file processing apparatus including:

an attribute input unit configured to acquire a value of an attribute for at least one file from the computer processor in order to represent the value of the attribute as a density, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

a position determining unit which sets a relative display position of a predetermined object representing the at least one file, the relative display position representing the value of the attribute by comparing the value in terms of the density having a virtual buoyant force exerted on the predetermined object displayed on the screen in at least one direction; and

a display processing unit configured to visually represent the predetermined object in the relative display position by displaying the object at the relative display position on a screen and indicates whether the object is comparatively heavy or light with respect to the density, with a difference in the display position in the direction of the virtual force.

Claim 24. (currently amended): A method of processing files, including:

acquiring values of a predetermined attribute for a plurality of intended files in order to represent the values of a predetermined attribute therefor by using a concept of density, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

setting, for each of the plurality of files, a relative display position of a predetermined object that represents symbolically the files in terms of whether the density thereof is high or low, based on a value of the predetermined attribute; and

displaying the objects representing the plurality of files at the respective display positions on a screen, and expressing visually a comparison of the density of the objects with each other object, a virtual buoyant force being exerted on the predetermined objects displayed on the

screen in at least one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 25. (currently amended): A computer-readable recording medium which stores a program executable by a computer, the program including the functions of:

acquiring values of a predetermined attribute for a plurality of intended files in order to represent the values of the predetermined attribute therefor by using a concept of density, said attribute comprising at least one of: a date and time of file preparation, a date and time of file updating, an importance of the file to be set by the user, a type of file to be determined by data format or file usage, a number of times that the file is updated, and a parameter indicating a frequency of file updating;

setting, for each of the plurality of files, a relative display position of a predetermined object representing symbolically the files in terms of whether the density thereof is high or low, based on the values of the predetermined attribute; and

displaying on a screen the objects of the plurality of files at the respective display positions, and expressing visually comparison of the density of the objects with each other object, a virtual buoyant force being exerted on the predetermined objects displayed on the screen in at least one direction and indicates whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.

Claim 26. (previously presented): The file processing apparatus according to Claim 1, wherein the attribute includes a data size.

Claim 27. (previously presented): The file processing apparatus according to Claim 1, wherein the attribute includes at least one of a preparation date, a date of file updating, an importance, a type of file, a number of files contained in a folder, a the number of sub-folders contained in the folder, a count of file updating, a frequency of file updating.